

Design Research: Aesthetic Epistemology and Explanatory Knowledge

Abstract The article explores the “what” and the “how” of design research. It discusses the epistemological assumptions of design and design research – the conception of true knowledge that underpins the quest to advance design knowledge through research. The article also examines the media and methods of doing design research – that is, the “how” of such research. As it developed over the past century, the design field has drawn extensively on three pivotal but often tacitly deployed epistemologies: the Platonic-Aristotelian, the pragmatic, and the postmodern. Platonic epistemology is latent in many commonplace design instruction texts. Pragmatic epistemology underscores the industrial-arts ethos of design. Postmodern epistemologies dominate in university programs – especially graduate and Ph.D. programs. The article considers how these competing epistemologies understand the role of imagination in the act of creation. The article then considers the role of explanation in the carrying out of research in creative design and arts fields. It addresses whether, and to what degree, design research ought to rely on explanatory words as its principal medium of research, or whether it is valid to substitute artifactual creation for intellectual explanation in the research process.

Keywords

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Introduction

When we design, we shape things. We do so in order that things in the world work better, harder, and faster; more efficiently, elegantly, and gorgeously; with better fit and ease of use, and so on. But what about design research? What does it add to the primordial desideratum of design? Research advances knowledge. How does this apply to design research? *What* knowledge does it produce? And *how* does it produce such knowledge?

The kind of knowledge design research produces in practice – the *what* of design research – results from the tacit theory of knowledge, or epistemology, that each researcher has. There is not just *an* epistemology of design, however – there are several. Each provides a set of philosophical underpinnings for design research and the knowledge it creates. Epistemologies are contentious by nature – they offer competing worldviews. In practice, design scholars rarely consult the source epistemologies. The dicta that circulate in the world of researchers provide summaries and epistemological assumptions that researchers adopt without even being especially aware of the origins or full implications of the theories of knowledge they implicitly rely on.

Design shapes things in the world, while epistemologies shape things in the realm of knowledge. Epistemologies outline what true knowledge (valid, legitimate, genuine knowledge) looks like, and enable us to account for the point, purpose, and meanings of the knowledge we acquire. Epistemologies shape knowledge acquisition and advancement by providing criteria of true and false knowledge. Aesthetic epistemologies do this for design knowledge. Once a stock of design knowledge accumulates, it has a second-hand effect – its shape starts to affect the shape of design practice. That accumulated stock filters down from epistemology to knowledge, and from knowledge to doing. The sequence begins with aesthetic epistemologies. These *design* design-knowledge by establishing expectations and patterns for it. The stock of knowledge that follows, and its epistemological presuppositions, shapes design work and outcomes in turn. In other words, epistemologies design the act of designing. This shaping occurs subtly, quietly, and implicitly in the background of design work. All design – no matter how practical its focus – relies on some tacit notion of true knowledge that gives it its recognizable shape and form.

The *what* of design research gives us an account of the “design-i-ness” or shape of design research. It gives insight into the purpose and meaning of the research – what its reason-for-being is. But design research, having addressed the question of its purpose or point, then has to address the issue of *how* it is conducted. What are its compelling methods, approaches, and media? From this starting point, a further series of questions unfolds. When an instance of design research is undertaken, the researcher has to consider several approaches. What is the best medium to use? What are the most appropriate tools for undertaking the research? All research is aimed at advancing knowledge. So how, then, do we best go about advancing design knowledge?

A key issue in design research is the media of research. This reflects the fact that design work is mostly an artifactual activity. It shapes three-dimensional, two-dimensional, and sometimes even one-dimensional objects. It posits these in the world. In so doing, it enhances the efficiency, structure, and beauty of the world. This contrasts with research, which is normally undertaken through the medium of explanatory words and texts. It is usually not done by arranging colors and textures, contours and voids, and the like. The question then arises: is design research properly objectivated in theses, treatises, and books? Or is it, ideally, best posited in design artifacts? That is to say, is design research principally an act of making or is it one of explanation? Does the design researcher mainly engage in an

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